STATE OF IDAHO
Department of Fish and Game

Joseph C. Greenley, Director

Quarterly Project Progress Report

UPPER SALMON RIVER
CHINOOK SALMON REARING PONDS

Project No. 88E25033 Contract No. 03-6-208-35444

Period Covered: July 1, 1976 to September 30, 1976

Columbia River Fisheries Development Program

February, 1977

Pahsimeroi Rearing Pond
(Summer Chinook)

Adult Return and Fish Collection

Chinook salmon were trapped and held at the Idaho Power Company facilities on the Pahsimeroi River. Two hundred seventy-four fish entered the facilities from July 8 to September 21 and were held for egg-taking. Sixty-four fish were lost in pre-spawning mortality.

No marked fish returned in 1976. The return from the 1974 brood year was calculated at 0.14% (Table 2).

Egg Taking

In September we took 302,000 eggs. Eye-up percentage was 89%, leaving 269,000 eggs that were transferred to Mackay Hatchery for rearing.

Decker Rearing Pond
(Spring Chinook)

Rearing

On June 22 the pond was stocked with about 412,000 spring chinook from Rapid River Hatchery. These fish averaged 172 per pound. These fish were fed 7,500 pounds of Rangen's Dry Chinook Salmon feed through the summer and until release at the end of September. The release was estimated to be 400,000 fish at 40.5 per pound and 115 mm fork length.

Disease

The eye fluke Diplostoma occurred in nearly all fish released in 1975. Control of the host snail was attempted in 1976.

We applied 3 ppm copper sulfate to the dessicated pond area in early June. After several days the pond was filled and flushed. A partial Kill of the host snail occurred.

A nearly 100% infestation of chinook with Diplostoma was apparent by the end of July, and reaffirmed in late September.

Following the release of Chinook we found that the pond bottom Contained about 100 snails per 0.5 cu. Ft. A copper sulfate treatment Of 20 ppm was applied to the dessicated pond. A dozer and gravel rake was used to mix the chemical with the substrate. The pond will be refilled and flushed next spring, prior to the next rearing cycle.

Our future use of the pond is rather indefinite. Continued use of Strong doses of copper sulfate is inadvisable due to local ecological Effects. Effective control of Diplostoma does not appear likely because

the rearing pond is apparently an ideal snail environment.

Consultation with specialists in Utah and with Dr. Keith Farrell of Washington State University did not lead to any breakthroughs in Diplostoma eradication.

We propose a greatly reduced rearing program in 1977, at a level that will not require feeding the fish, but which will allow us to monitor for the presence of Diplostoma as an evaluation of last fall's control attempt.

Prepared by:

David W. Ortmann
Anadromous Fishery Supervisor

Table 1. Timing of arrival of adult summer Chinook at Pahsimeroi River trap, 1976.

Date	Number of Fish	Cumulative Total
July 8	8	8
July 12	17	25
July 15	32	57
July 22	55	112
July 26	31	143
July 28	8	151
July 30	8	159
August 2	5	164
August 6	2	166
August 9	4	170
August 13	7	177
August 17	8	185
August 20	9	194
August 23	6	200
August 26	10	210
August 27	2	212
August 30	3	215
September 1	6	221
September 3	11	232
September 10	14	246
September 17	19	265
September 21	9	274

Table 2. Summary of operations, Pahsimeroi River summer Chinook propagation project.

Brood year	Eggs Taken	Time of release	Number released	Size	Number Marked	Mark	Adult returns[1/] Jacks	2-ocean	3-ocean	Percent Return
1969	464,150	May, 1970	393,840	40/lb. 102 mm	-0-	--				
1970	443,772	May, 1971	252,071	49/lb.	50,500	RV	0 (1972)	75 (1973)	70 (1974)	0.058
1971	356,628	May, 1972	102,000	46/lb.	52,000	LV ½ An	0 (1973)	25 (1974)	33 (1975)	0.057
		Sept., 1972	129,182	11/lb.	46,000	RV ½ Rn	11 (1974)	6 (1975)	0 (1976)	0.037
1972	383,000	May, 1973	217,000	50/lb.	30,000	RV	22 (1974)	22 (1975)	0 (1976)	0.147
1973	496,860	May, 1974	330,037	41/lb.	-0-	--	--	--	--	--
1974	219,000	May, 1974	114,560	40/lb. 104 mm	25,000	LV	0 (1976)	(1977)	(1978)	
1975	249,546	May, 1976	120,972	39/lb. 110 mm	25,000	LM	(1977)	(1978)	(1979)	
1976	302,040	(May, 1977)					(1978)	(1979)	(1980)	

1/Assuming that marked and unmarked fish returned at same rate.